2SC3931

Silicon NPN epitaxial planar type

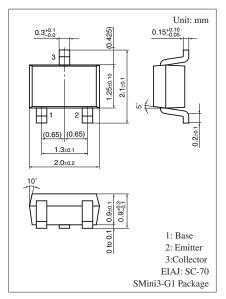
For high-frequency amplification

■ Features

- Optimum for RF amplification of FM/AM radios
- High transition frequency f_T
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V _{CBO}	30	V	
Collector-emitter voltage (Base open)	V _{CEO}	20	V	
Emitter-base voltage (Collector open)	V_{EBO}	3	V	
Collector current	I_C	15	mA	
Collector power dissipation	P _C	150	mW	
Junction temperature	T_{j}	150	°C	
Storage temperature	T_{stg}	-55 to +150	°C	



Marking Symbol: U

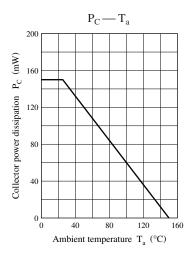
■ Electrical Characteristics $T_a = 25$ °C ± 3 °C

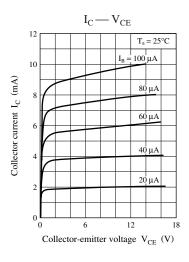
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_C = 10 \ \mu A, I_E = 0$	30			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \ \mu A, I_C = 0$	3			V
Base-emitter voltage	V_{BE}	$V_{CB} = 6 \text{ V}, I_{E} = -1 \text{ mA}$		720		mV
Forward current transfer ratio *	h_{FE}	$V_{CB} = 6 \text{ V}, I_{E} = -1 \text{ mA}$	65		260	_
Transition frequency	f_T	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 200 \text{ MHz}$	450	650		MHz
Common-emitter reverse transfer	C _{re}	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 10.7 \text{ MHz}$		0.8	1.0	pF
capacitance						
Power gain	G_{P}	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 100 \text{ MHz}$		24		dB
Noise figure	NF	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 100 \text{ MHz}$		3.3		dB

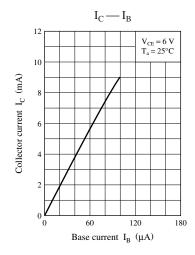
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

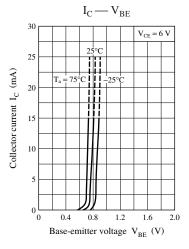
2. *: Rank classification

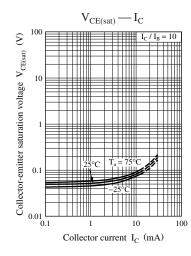
Rank	С	D
h_{FE}	65 to 160	100 to 260

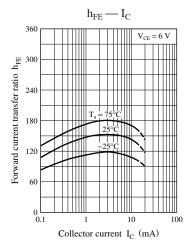


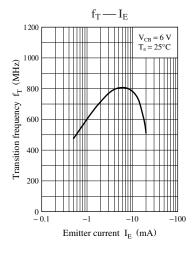


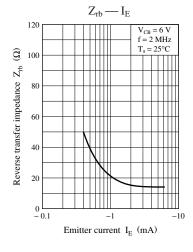


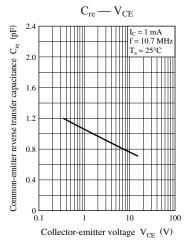




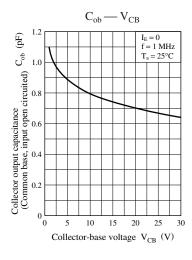


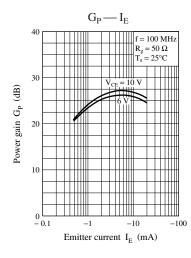


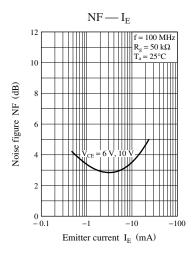


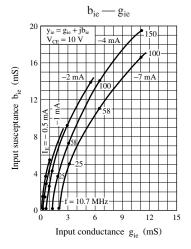


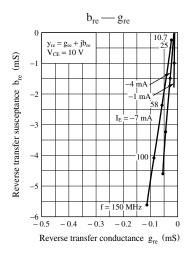
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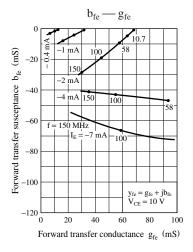


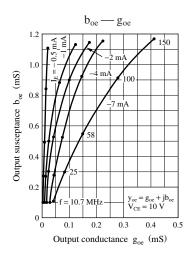












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